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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/886,928 | 06/21/2001 | Tatsuo Ozaki | 4041K-000023 | 6210 |

27572 7590 07/21/2004

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EXAMINER

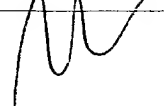
PATEL, NIHIR B

ART UNIT PAPER NUMBER

3743

DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/886,928 | Applicant(s) OZAKI ET AL.  | |
| | Examiner Nihir Patel | Art Unit 3743 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5, 7, 11, 13, and 14 have been considered but are moot in view of the new ground(s) of rejection. Since the applicant has amended claim 1 to include "a rectangular cross section fluid chamber" which requires a new search, this office action is therefore made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 7, 11, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. Patent No. 11-287584 in view of Nobuaki et al. Patent No. 08327286

Nakamura discloses the applicant's invention as claimed with the exception of providing a header tank that comprises concave and convex portions being formed in first portion of the long sidewall of the header tank by plastic deformation.

Nobuaki discloses a heat exchanger that does provide a header tank that comprises concave and convex portions formed in a portion of the long sidewall surface of the header tank. Therefore it would be obvious to modify Nakamura's invention by providing a header tank that comprises concave and convex portions being formed in first portion of the long sidewall of the header tank in order to improve the heat transfer rate.

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Plastic deformation is a method of manufacturing and is given no weight to an apparatus claim. Since the applicant has not mentioned the advantages of having concave and convex portions formed in a portion of the long side wall surface of the rectangular cross section of the header tank by plastic deformation, it is simply a matter of design choice that the concave and convex portions formed in a portion of the long sidewall surface of the rectangular cross section of the header tank could have been manufactured by stamping method.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. Patent No. 11-287584 in view of Nobuaki et al. Patent No. 08327286 as applied to claims 1, 3, 5, 7, 11, 13, 14, and 15 above, and further in view of Lu US Patent No. 5,482,114.

Nakamura and Nobuaki disclose the applicant's invention as claimed with the exception of providing reinforcements and respective mounting member that are formed separately from each other.

Lu discloses a charged air cooler mounting bars that dos provide reinforcements and respective mounting member that are formed separately from each other. Therefore it would be obvious to modify Nakamura and Nobuaki's inventions by providing reinforcement and respective mounting member that are formed separately from each other to dismount the heat exchanger if it were to malfunction and to reduce the cost of manufacturing.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. Patent No. 11-287584 in view of Sugimoto et al. US Patent No. 6,357,521.

Nakamura discloses the applicant's invention as claimed with the exception of providing header tanks that comprise a pair of L-shaped plate members in which the concave and convex portions are formed.

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Sugimoto discloses a heat exchanger having header tank that does provide header tanks that comprise a pair of L-shaped plate members in which the concave and convex portions are formed (see figure 2). Therefore it would be obvious to modify Nakamura's invention by providing header tanks that comprise a pair of L-shaped plate members in which the concave and convex portions are formed in order to provide a tight seal and to improve the heat transfer rate.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (703) 306-3463. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (703) 308-0101.

NP
July 15th, 2004

Henry Bennett
Supervisor, Patent Examiner
Group 3700